

100

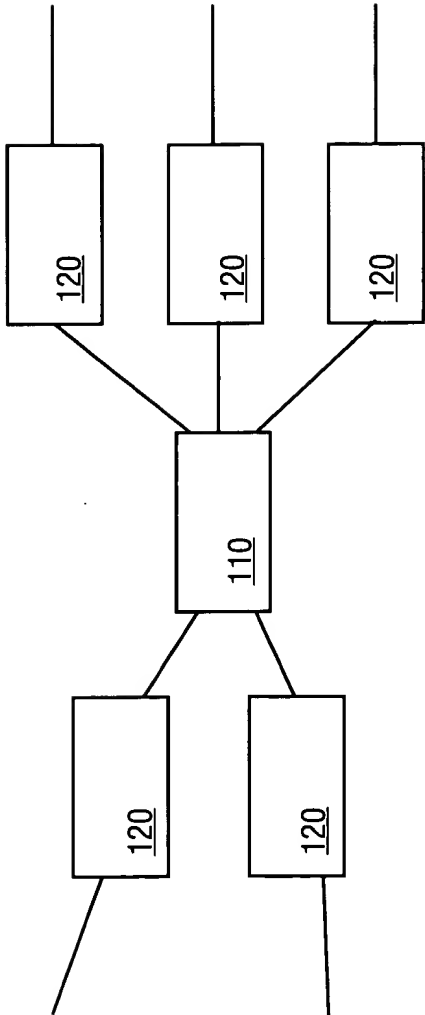


FIG. 1

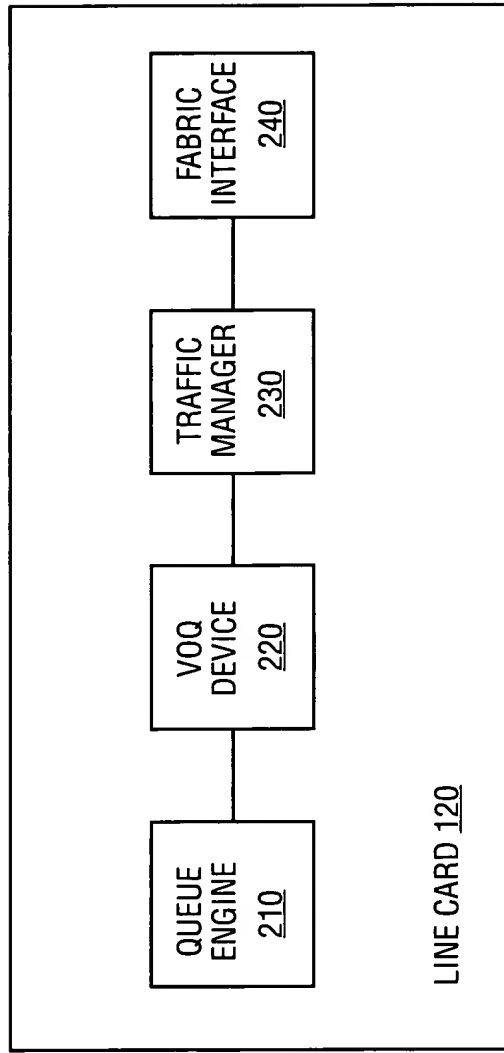


FIG. 2

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graph TD
    310[CHANGE THE STATUS OF A VOQ FROM EMPTY TO NON-EMPTY] --> 320[INITIALIZE A TDT FOR THE VOQ]
    320 --> 330{DETERMINE WHETHER AT LEAST ONE TDT IS LESS THAN CT}
    330 -- NO --> 360[SCHEDULE A GRANT TO A VOQ USING EITHER A ROUND ROBIN OR A PRIORITY-BASED SCHEDULING METHOD]
    330 -- YES --> 340[SELECT THE SMALLEST TDT THAT IS LESS THAN CT]
    340 --> 350[SCHEDULE A GRANT TO THE CORRESPONDING VOQ AND RECALCULATE A NEW TDT FOR THE VOQ]
    350 --> 330

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FIG. 3

0072884 420400

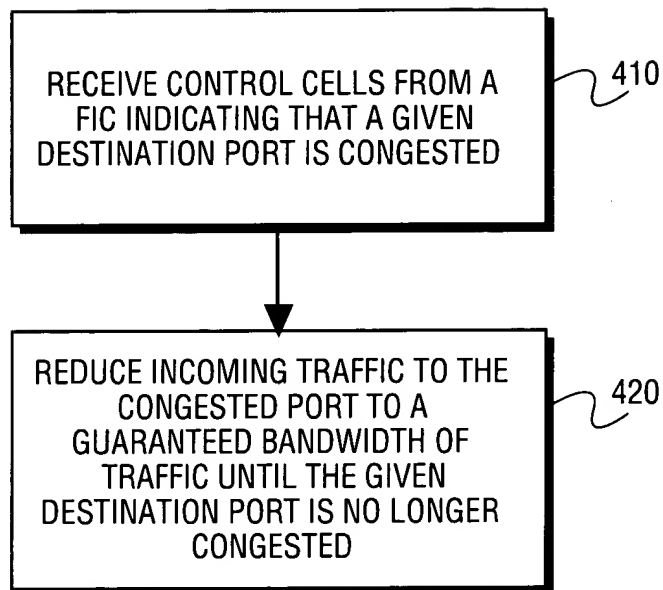


FIG. 4

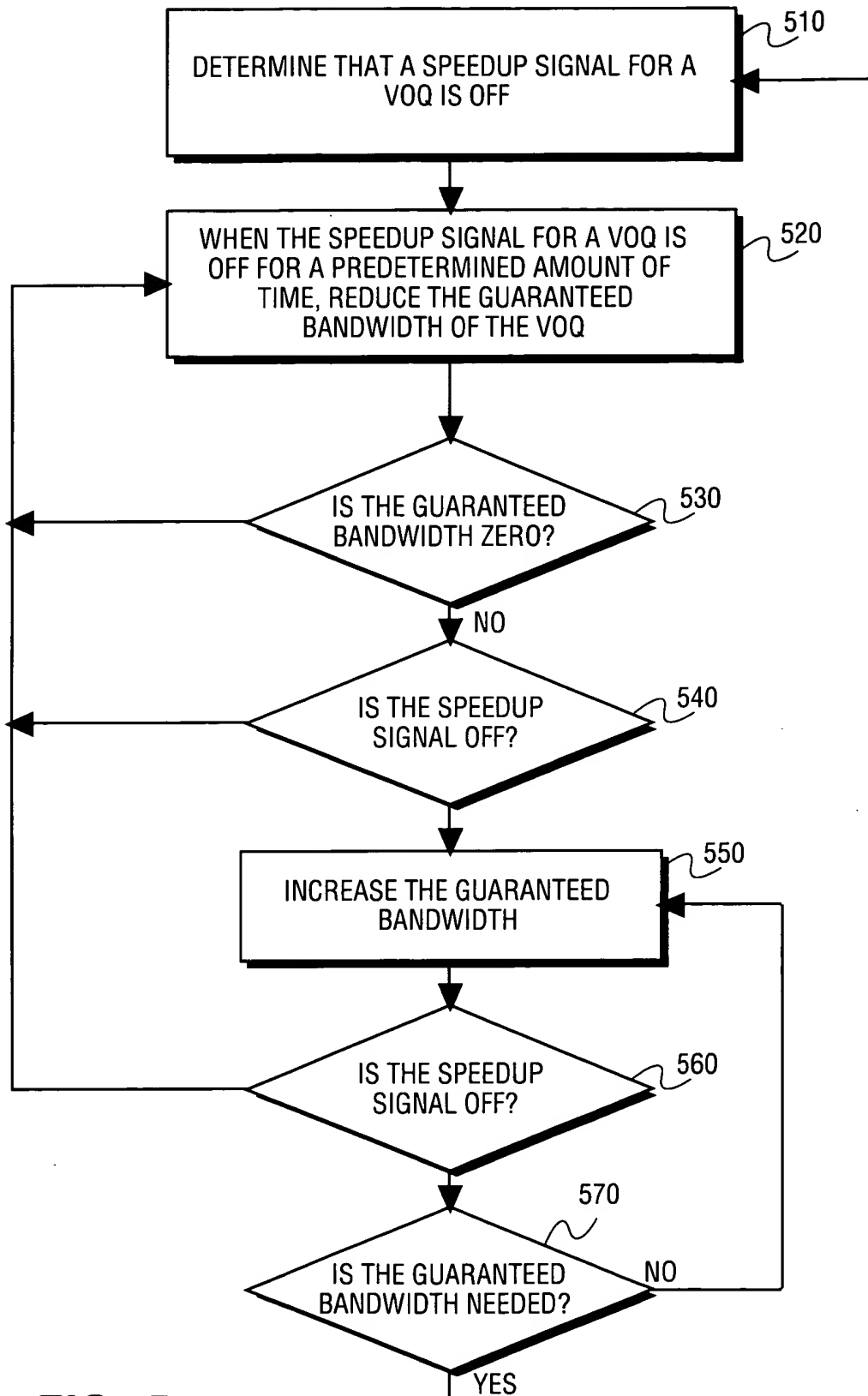


FIG. 5

Figure 1 is a block diagram of a packet scheduling system. The system includes a counter (CT) and two identical processing blocks (620) for Q0 and Q119. Each block 620 contains an ICG0, a multiplier (+), a divider (/), a subtractor (SUB), and a TDT0 register. The output of the subtractor is compared with the TDT0 register to produce a valid signal (TDT0_VALID). The valid signals are combined in an OR gate (650) to produce the FIND_SMALLEST_TDT signal. The system also includes a BINARY TREE COMPARATOR & ROUND-ROBIN SELECTOR (660) which outputs VOQ# FOR NEXT GRANT and LINK# FOR NEXT GRANT.

FIG. 6